

ATTORNEY DOCKET NO. 21101.0037U2  
PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of )  
PRESTWICH, et al. )  
Application No. 10/552,382 ) Group Art Unit: Unassigned  
Based on PCT – PCT/US2004/011060 )  
National Filing Date: October 7, 2005 ) Examiner: Unassigned  
International Filing Date: April 9, 2004 ) Confirmation No. Unassigned  
For: ANALOGS OF LYSOPHOSPHATIDIC ACID )  
AND METHODS OF MAKING AND USING )  
THEREOF )

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

NEEDLE & ROSENBERG, P.C.  
Customer Number 23859

March 6, 2006

Sir:

Pursuant to the requirements of 37 C.F.R. § 1.56, submitted herewith on the accompanying Information Disclosure Statement List is a listing of documents known to Applicants and/or their attorneys. In accordance with 37 C.F.R. § 1.98(a)(2), copies of any cited U.S. patent or U.S. patent application publications are not enclosed. Copies of any cited foreign patent document and/or any non-patent publication are enclosed.

This Information Disclosure Statement is believed to be filed in a timely manner pursuant to 37 C.F.R. § 1.97(b)(3), in that a first Office Action on the merits of the present patent application has not yet been mailed to Applicants.

In accordance with the provisions of M.P.E.P. § 2001.06(b) and 37 C.F.R. § 1.98(b)(3), Applicants would like to bring to the attention of the Examiner the existence of the co-pending patent

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application(s) identified below, which were filed in the United States Patent and Trademark Office:

<b><u>Application No.</u></b>	<b><u>Date Filed</u></b>	<b><u>Inventors</u></b>	<b><u>Attorney Docket No.</u></b>
*10/476,824	May 6, 2002	Luo et al.	21101.0014U2
*10/513,069	May 6, 2003	Prestwich et al.	21101.0028U2
*10/519,173	April 19, 2005	Prestwich et al.	21101.0036U2
10/556,693 (WO05/000402)	May 13, 2004	Prestwich et al.	21101.0039U2
PCT/US04/40726 (WO05/056608)	December 6, 2004	Prestwich	21101.0051P1
PCT/US01/22556 (WO02/06373)	July 17, 2001	Prestwich	21101.0008U2

The pending application(s) identified with an asterisk (\*) are stored in the Image File Wrapper (IFW) system of the USPTO. Accordingly, copies of the cited specification(s), including the claims and drawings thereof, are not enclosed in accordance with the waiver to 37 CFR 1.98(a)(2)(iii) dated September 21, 2004. Copies of the application not identified with an asterisk are enclosed.

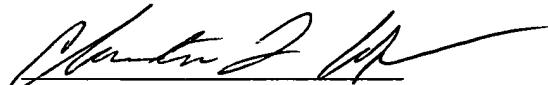
Consideration of the cited documents and making the same of record in the prosecution of the above-referenced application are respectfully requested.

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No fee is believed due; however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

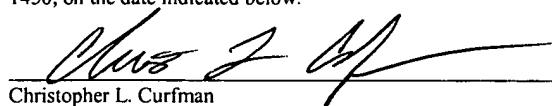
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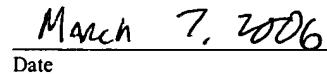
  
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**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8**

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Christopher L. Curfman

  
Date

<b>INFORMATION DISCLOSURE STATEMENT LIST</b>  (Use as many sheets as necessary)				Complete if Known			
				Application Number		10/552,382	
				Filing Date		10/07/2005	
				First Named Inventor		Prestwich <i>et al.</i>	
				Group Art Unit		Unassigned	
				Examiner Name		Unassigned	
<b>U.S. PATENT DOCUMENTS</b>							
Examiner's Initials	Cite No.	Document No.	Date	Name	Class	Subclass	Filing Date (if appropriate)
	A1	6,495,532	12/17/02	Bathurst <i>et al.</i>	514	110	03/18/98
	A2	6,380,177	04/30/02	Erickson	514	141	06/23/00
<b>FOREIGN PATENT DOCUMENTS</b>							
Examiner's Initials	Cite No.	Foreign Patent Document Country Code-Number-Kind Code	Date	Name		Translation Yes/No	
	A3	WO 2002/094286	11/28/02	Mukai <i>et al.</i>		Abstract	
	A4	WO 2003/104246	12/18/03	Kobayashi <i>et al.</i>		Abstract	
<b>NON-PATENT DOCUMENTS</b>							
Examiner's Initials	Cite No.	Non-Patent Citations (include Author, Title, Publisher, Relevant Pages, Date and Place of Publication)					
	A5	Bandoh <i>et al.</i> , "Lysophosphatidic Acid (LPA) Receptors of the EDG Family Are Differentially Activated by LPA Species. Structure-Activity Relationship of Cloned LPA Receptors," FEBS Lett. 478:159-165.					
	A6	Contos <i>et al.</i> , "Lysophosphatidic Acid Receptors, Mol. Pharmacol., 2000 58:1188-1196.					
	A7	Chun, J., "Lysophospholipid Receptors: Implications for Neural Signaling," Crit Rev. Neurobiol., 1999 13:151-68.					
	A8	Erickson <i>et al.</i> , "Lysophosphatidic Acid and Ovarian Cancer: A Paradigm for Tumorigenesis and Patient Management," Prostaglandins Other Lipid Mediat., 2001 64:63-81.					
	A9	Fang <i>et al.</i> , "Lysophospholipid Growth Factors In The Initiation, Progression, Metastases, and Management of Ovarian Cancer," Ann. N.Y. Acad. Sci., 2000 905:188-208.					
	A10	Fang <i>et al.</i> , "Lysophosphatidic Acid is a Bioactive Mediator in Ovarian Cancer, Biochim. Biophys. Acta, 2002 1582:257-264.					
	A11	Fischer <i>et al.</i> , "Naturally Occurring Analogs of Lysophosphatidic Acid Elicit Different Cellular Responses through Selective Activation of Multiple Receptor Subtypes," Mol. Pharmacol., 1998 54:979-988.					
	A12	Ghangas <i>et al.</i> , "Stereospecific Synthesis of D-1-Fluorodeoxyglycerol 3-phosphate and Its Effects on Glycerol 3-Phosphate Dehydrogenase," Biochemistry, 1971 10(17):3204-3210.					
	A13	Kobayashi <i>et al.</i> , "Synthesis of 1-O-Acylglycerol 2,3-Cyclic Phosphate: Determination of the Absolute Structure of PHYLPA, A Specific Inhibitor of DNA Polymerase $\alpha$ ," Tetrahedron Lett., 1993 34(25):4047-4050.					
	A14	Lal <i>et al.</i> , "Electrophilic NF Fluorinating Agents," Chem. Rev., 1996 96:1737-1755.					
Examiner Signature:				Date Considered:			
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

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<b>NON-PATENT DOCUMENTS</b>			
Non-Patent Citations (include Author, Title, Publisher, Relevant Pages, Date and Place of Publication)			
	A15	Lloyd et al., "Synthesis of 1-Deoxy-1-Fluoro-L-Glycerol and its 3-Phosphate," <i>Carbohydrate Res.</i> , 1973 26:91-98.	
	A16	McIntyre et al., "Identification of an Intracellular Receptor for Lysophosphatidic Acid (LPA): LPA is a Transcellular PPAR $\gamma$ Agonist," <i>Proc. Nat. Acad. Sci. USA</i> , 2003 100:131-136.	
	A17	Moolenaar, "Lysophosphatidic Acid, A Multifunctional Phospholipid Messenger," <i>J. Biol. Chem.</i> , 1995 270:12949-12952.	
	A18	Mukai et al., "Inhibition of Tumor Invasion and Metastasis by a Novel Lysophosphatidic Acid (Cyclic LPA)," <i>Int. J. Cancer</i> , 1999 81:918-922.	
	A19	Murakami-Murofushi et al., "Inhibition of Cell Proliferation by a unique Lysophosphatidic Acid, PHYLPA, Isolated from <i>Physarum polycephalum</i> : Signaling Events of Antiproliferative Action by PHYLPA," <i>Cell Structure and Function</i> , 1993 18:363-370.	
	A20	Murakami-Murofushi et al., "Inhibition of Eukaryotic DNA Polymerase $\alpha$ with a Novel Lysophosphatidic Acid (PHYLPA) Isolated from Myxamoebae of <i>Physarum polycephalum</i> ," <i>J. Biol. Chem.</i> , 1992 267(30):21512-21517.	
	A21	Murakami-Murofushi et al., "Selective Inhibition of DNA Polymerase- $\alpha$ Family with Chemically Synthesized Derivatives of PHYLPA, a Unique <i>Physarum</i> Lysophosphatidic Acid," <i>Biochem. Biophys. Acta</i> , 1995 1258:57-60.	
	A22	National Institutes of Health, Grant No. NS 29632	
	A23	Nieschalk et al., "Synthesis of Monofluoro- and Difluoro- methylenephosphonate Analogues of <i>sn</i> -Glycerol-3-phosphate as Substrates for Glycerol-3-Phosphate Dehydrogenase and the X-Ray Structure of the Fluoromethylenephosphonate Moiety," <i>Tetrahedron</i> , 1996 52(1):165-176.	
	A24	Qian et al., "Enantioselective Responses to a Phosphorothioate Analogue of Lysophosphatidic Acid with LPA <sub>3</sub> Receptor-Selective Agonist Activity," <i>J. Med. Chem.</i> , 2003 46:5575-5578.	
	A25	Qian et al., "Synthesis of Migration-Resistant Hydroxyethoxy Analogues of Lysophosphatidic Acid," <i>Org. Lett.</i> , 2003 5(24):4685-4688.	
	A26	Schrotter et al., "An efficient Synthesis of 5-Isopropyl-2-pyridinecarboxylic Acid." <i>J. Prakt. Chemie.</i> , 1990 332:191-197.	
Examiner Signature:		Date Considered:	
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

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		Group Art Unit	Unassigned
		Examiner Name	Unassigned
<b>NON-PATENT DOCUMENTS</b>			
Non-Patent Citations (include Author, Title, Publisher, Relevant Pages, Date and Place of Publication)			
A27	Smyth et al., "Lipid Phosphate Phosphatase 1 (LPP1) Regulates Lysophosphatidic Acid Signaling in Platelets", J. Biol. Chem., 2003 278:43214-43223.		
A28	Sturm and Dignass, "Modulation of Gastrointestinal Wound Repair and Inflammation by Phospholipids," Biochim. Biophys. Acta, 2002 1582:282-288.		
A29	Sugiura et al., "Lysophosphatidic Acid, A Growth Factor-Like Lipid, In The Saliva," J. Lipid Res., 2002 43:2049-55.		
A30	Takahashi et al., "Isolation of a New Species of <i>Physarum</i> Lysophosphatidic Acid, PHYLPA, and its Effect on DNA Polymerase Activity," Cell Structure and Function, 1993 18:135-138.		
A31	Tarzia et al., "Design, Synthesis, and Structure – Activity Relationships of Alkylcarbamic Acid Aryl Esters, a new Class of Fatty Acid Amide Hydrolase Inhibitors," J. Med. Chem., 2003 46:2352-2360.		
A32	Wu et al., "Stereocontrolled Synthesis of Water-Soluble Inhibitors of phosphatidylinositol-Specific Phospholipase C: Inhibition Enhanced by an Interface," Biochemistry, 1997 36:356-363.		
A33	Xu and Prestwich, "Concise Synthesis of Acyl Migration-Blocked 1,1-Difluorinated Analogues of Lysophosphatidic Acid," J. Org. Chem., 2002 67:7158-7161.		
A34	Xu and Prestwich, "Synthesis of Chiral ( $\alpha,\alpha$ -Difluoroalkyl)phosphonate Analogues of (Lyo)phosphatidic Acid via Hydrolytic Kinetic Resolution," Org. Lett., 2002 4(23):4021-4024.		
A35	Xu et al., "Synthesis of Difluoromethyl Substituted Lysophosphatidic Acid Analogues," Tetrahedron, 2004 60(1):43-49.		
A36	Xu et al., "Synthesis of Monofluorinated Analogues of Lysophosphatidic Acid," J. Org. Chem., 2003 68(13):5320-5330.		
A37	Xu et al., "Synthesis of $\alpha$ -Fluorinated Phosphonates from $\alpha$ -Fluorovinylphosphonates: A New Route to Analogues of Lysophosphatidic Acid," Org. Lett., 2003 5(13):2267-2270.		
A38	Xu et al., "Characterization of an Ovarian Cancer Activating Factor In Ascites From Ovarian Cancer Patients," Clinical Cancer Research, 1995 1:1223-1232.		
A39	Yang and Burton (1993) A Novel and Practical Preparation of .Alpha.,.Alpha.-Difluoro Functionalized Phosphonates from Iododifluoromethylphosphonate, J. Org. Chem., 57(17):4676-4683.		
A40	Yang et al., "In Vivo Roles of Lysophospholipid Receptors Revealed By Gene Targeting Studies In Mice," Biochim. Biophys. Acta, 2002 1582:197-203.		
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